

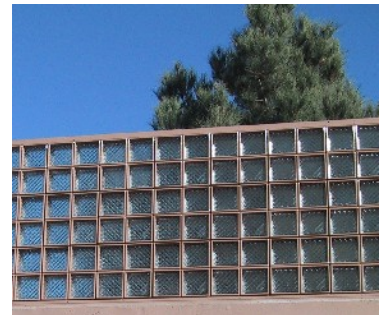


### State Planning and Research (SPR) Projects

#### SPR-584, SURVEY OF TRAFFIC NOISE REDUCTION PRODUCTS, MATERIALS, AND TECHNOLOGIES

This study identified noise reduction products, materials, and technologies currently available and that may have potential as noise mitigation alternatives. The literature review and survey identified measures that are being used by U.S. transportation organizations as well as international efforts. Some key findings from the literature review show the following best practices:

- Pavement Noise Reduction Products – Noise or sound walls dominate this category and have been used for decades in the U.S. Findings from the literature revealed a variety of materials to choose from that are both aesthetically attractive, and effective in reducing sound from tire pavement noise.
- Pavement Noise Reduction Materials –European studies show that higher porous mixtures tend to clog under slower speeds. Two layer-porous mixes have been found to be effective in Europe and the US.
- Pavement Noise Reduction Technologies – Use of thin-textured surfacings with a negative pavement depression are recommended for urban or low-speed roadway sections. Diamond grinding enhances noise reduction on concrete surfaces in sensitive locations.



#### SPR-592, BUILDING TRIBAL TRAFFIC SAFETY CAPACITY

Nationally, the annual motor vehicle crash (MVC) mortality rates for American Indians per 100,000 persons have been three to four times greater than the general public. This trend has also been consistently evident in Arizona. The annual MVC mortality rates for American Indians in Arizona per 100,000 persons have been three times higher than the statewide population. This project identified methods for assisting tribes to develop capacity in five areas: (1) decision making; (2) data collection, storage, maintenance, and integration with other programs; (3) equipment and software; (4) project prioritization; and (5) project development, implementation, and evaluation. The research produced a reference document for the tribes, *Tribal Highway Safety Improvement Program Model and Guidelines*. This resource presented four-task model and nine policy and technical guidelines to be used as a planning resource for tribes and the Federal Highway Administration to consider when establishing a Tribal Highway Safety Improvement Program or eliminating roadway hazards on tribal lands.

American Indian Reservations and Transportation District Boundaries

### COMPLETED PROJECTS

All recent published reports and many archival reports are available online at:

[www.azdot.gov/TPD/ATRC/Publications/project\\_reports/index.asp](http://www.azdot.gov/TPD/ATRC/Publications/project_reports/index.asp)

### ATRC LIBRARY

ATRC library information, including the library catalogue, is available online at:

<http://www.azdot.gov/TPD/ATRC/library/index.asp>

### FY2010 RESEARCH PROPOSALS

It's time to start thinking about research topics for the 2010 fiscal year. Proposals for research may be submitted to the Arizona Transportation Research Center (ATRC) at any time. ATRC project managers are available to assist with proposal preparation. There is a link on the ATRC web site which can be used to submit a research proposal:

[www.azdot.gov/tpd/atrc/research/suggestion\\_form.asp](http://www.azdot.gov/tpd/atrc/research/suggestion_form.asp).

Proposals may also be submitted to the ATRC manager or an ATRC Project Manager. In addition to these informal processes, ATRC Project Managers conduct formal proposal solicitation activities for each research emphasis area. These formal activities include meetings with key groups or individuals within the Arizona Department of Transportation (ADOT) and research emphasis area workshops.

Each proposal requires a sponsor—an ADOT management level person with the authority to implement the research results. ATRC can assist with identifying potential project sponsors. After initial screening by ATRC, proposals are evaluated and ranked by the ADOT Research Council and funded in the order of rank.



### ATRC Staff

Frank Darmiento, M.S.E., P.E. – Manager

#### PROJECT MANAGERS

Christ Dimitroplos, P.E.

Jason Harris, MBA, PMP, P.E.

Tom Kombe, Ph.D., P.E.

VACANT

VACANT

Dale Steele, M.A., M.L.S. – Librarian

Evelyn Howell, B.A. – Technical Editor

Christopher Gass, B.S. – Data Technician

A.J. Kerin – Engineering Assistant



Arizona State Route 260 wildlife underpass

### Contact:

Frank T. Darmiento, P.E.

Telephone: (602) 712-3134

Fax: (602) 712-3400

[fdarmiento@azdot.gov](mailto:fdarmiento@azdot.gov)

ARIZONA TRANSPORTATION RESEARCH CENTER  
2739 E. Washington St., Mail Drop 075R  
Phoenix AZ 85034-1422

<http://www.azdot.gov/tpd/atrc/index.asp>

**MISSION:** The ATRC mission is to pursue and share knowledge in transportation systems and programs.